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Sudan

LOCATION OF INDUSTRY

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LOCATION OF INDUSTRY.

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Since the introduction of the Approved Enterprises (Concessions) Act in 1956 more than 200 projects have been classified as approved enterprises. Most of them, if not all, are concentrated in the Khartoum area, in Khartoum North and Omdurman. The object behind establishing such industrial areas is to install all service stations, garages, light and heavy industries, and other utilities for supplying that particular town or Province and offering the services required. The Greater Khartoum Area fulfills the requirements of good siting.

The Khartoum light industrial area now holds all garages, service stations, stores and very light industries e.g. beverage industries, packing, cleaning, confectionery, stationery, etc. The area is now fully occipied, but still there is an area to be accommodated for expansion in the coming 25 years. Khartoum industrial area is well sited as far as transportation is concerned. The railway central station lies half a mile east; it is connected by road to Omdurman, and by rail and road to Khartoum North which is the centre of industry in the Sudan and by rail to the port. Generally speaking, it is a centre of rail and road transport to all parts of the country. It is hard to find an ideal site for locating a certain or a number of industries. The largest industrial area is the heavy industries areas of Khartoum North. It is quite suitable from many aspects viz availability of cheap water and electricity, good roads and railway sidings, having a number of related industries in the same vicinity and so on. Its main disadvantage, however, lies in the absolute flatness of the area which makes the disposal of affluents quite a problem, the satisfactory solution of which calls for lots of expenses. Shortly, however, a sewage system will be made and connected to the main system of the town. The concentration of all industries in this area allows it to enjoy most of the privilages necessary for plant

location.

Khartoum North industrial area - Sudan industrial centre - is considerably growing and increasing in size. When considering the establishment of this area, several factors were taken into consideration. The three towns markets is the most active market in the Sudan and the wholesale merchants and the commission agents who supply the provincial markets are in the three towns. Secondly, Khartoum North enjoys a good rail service and factories could easily enjoy a railway siding facility. Apart from being a central place between the port and the markets, Khartoum North also enjoys pure water, well water supply and enough electricity.

Transport, market, proximity to Port Sudan, power, water, supplies and labour have all put Khartoum North area on a very high level as opposed to other sites for industries The most important industries in Khartoum North area are the Sudan-American Textile Industries, the Flour Mills, the Glassworks Factory, the Brewery, the Distilleries, the Chemical Industries, the Soap and Oil Mills. It is difficult, however, to lay down figures for the number of workers per industrial area. This is because different industries vary in their need. Some have their machinery at ground level, so they occupy a large area, while others have multi-story buildings like the flour mills and the distilleries. Factories which are equipped with automatic machines need a small number of workers. On the contrary, industries like the knitwear need many workers in somewhat small area. Realizing that there is a remarkable progress in the industrial field and that there is a great tendency for establishing new industries, four plots have been demarcated for the allotment of the approved enterprises in the next 25 years.

In all cases a flat rate of P.T.23 per square metre is fixed for Khartoum North and P.T. 46 for Omdurman. This rate enclose the premium price of the land plus the essential works charge. In the first case the premium price is P.T.10 per square metre and P.T.13 representing the charges for essential works that would be carried out e.g. road making canals for drainage, and providing all other utilities and services for the area. In the second case the actual price per square metre is P.T.25 and essential works charges is P.T.21 per square metre.

(1 Sterling Pound = about P.T.97)

The rates for special sites outside the Greater Khartoum area are assessed according to the land value of the particular locality. The number of industries located outside Khartoum Province is considerably small, one or two factories may be placed adjacent to a certain town, for example, the cigarette factory in Wad Medani, two match factories will be constructed one in Kosti and the other in El Obeid, a petroleum refinery, fertilizer factory and grain elevator are to be established in Port Sudan and Gedaref. As there are great potentialities of fruits and vegetables in Northern Province a cannery for the processing of both will be located at Karima where there is at present a factory for fumigation, packing of dates and manufacture of alcohol for industrial and pharmaceutical purposes. For the same reason, a factory for drying of milk will be set up in Babanousa (Kordofan Province). Besides a cardboard factory and a dom powder producing factory, for animal fodder, and which have already been built in Kassala Province, a third one for onion dehydration will be erected in the very area where there is abundance of onion.

The industrial areas in the three towns are well organized. Obnoxious industries have been grouped in the remote part of Omdurman industrial area, Khartoum North area is by far the best organized one, and it can be said that the majority of

industries are concentrated in this area.

Grouping or concentration of industries in one particular area will definitely lead to many advantages as well as some disadvantages. Regarding the advantages, it would be of much use to inter-related industries. This is mainly due to the fact that cost of transportation of the by-product or the finished commodities from one factory to the other will be considerably low. Thus factories making use of this fact will economise in transport and time as well. Again, as there is always heavy lorry traffic between factories and the markets as well as among inter-related industries, the aim of grouping, in this respect, is to minimise danger and nuisance that might be caused to the residential areas. It is also evident that public or essential services such as water, electricity, water disposal system will be cheaper for a group of industries than individuals. Public transport for workers will be easily provided. Equally important is the social side. For the welfare of workers, sport facilities, medical services, display centre, clubs for the industrialists to entertain customers should be available. This is only possible in case that all industries are located in one area. On the other hand, the disadvantages of such organization are mainly due to the nuisance caused by noise and smell. With regard to smell, some industries abattoirs, tanning, chemicals, soap and oil industries make this type of nuisance. Dust in wood-working, cement manufacture, cleaning of wheat and sesame may cause some sort of inconvenience to others. Flies and vermins which are likely to be found in the areas of food industry, glue making and tanneries may spread and infect the whole area. Accumulation of raw materials together with some of the finished and waste products that cannot quickly be taken create some untidiness. Fortunately, in the greater Khartoum area most of these problems have been overcome by setting industries that share in these

troubles in separate areas.

The Government is now trying to make use of all raw materials resources in the different parts of the country, especially in the South. This was not possible in the past because some factors stood in the way of the full utilisation of these resources. These factors are:-

1) Distance and lack of easy communication.
2) Lack of Skilled Labour
3) Lack of capital and technical know-how.
4) Lack of cheap power.

Fortunately, with the economic development that took place in the North and the attitude of the Sudan Government towards the development of the South, which contains resources of raw material, which have not been tapped, and its policy towards the industrialization of the whole country, most of these factors are now easier to overcome.

The problem of communication will no longer be a major obstacle to industrial development as the extension of the Sudan Railways system to the South has now reached Wau a fact which puts the Southern Sudan within easy reach.

The difficulty of finding skilled labour and Marketing facilities will be lessened as a result of the increase in technical and vocational training.

Industries that have already been established in the South are: The Textile Industry at Nzara, saw mills, soap factories and oil mills, while in Wau we find only one factory for the manufacture of twines and ropes from sisal, but now a vegetable and fruit canning factory will be set up in Wau too. Investigations carried on papyrus plant have revealed that it is possible to make a paper factory which will meet the country's need at the start and may be able to export the surplus.

Consequently it is hoped that a factory for manufacture of paper from papyrus will be constructed in Malakal.

For the development of industry in other parts of the country, attention has been drawn to the utilization of potential water power at Sennar Dam, Roseires Dam and Khashm El Girba Dam. As for the first it is expected to be operated in November 1962. However, in a few years to come electric power will be quite available and can cater for the increasing demand of the growing industries. Measures taken by the Government in the Seven Years Plan for extension of railway lines, improvement of roads and the establishment of centres and technical schools for training of workers, all these will contribute towards the diffusion of industry in the country.

When deciding the location of a certain industry, however, the aim is usually to select the best locality that would enable the manufacturer to bring raw materials to be processed and delivered to the consumer at the lowest possible cost.

Although this statement shows generally the problem of plant location, yet in many cases the selection of a suitable site for an industry may be influenced by other factors which would not have weight on the cost; thus the function of the planner will generally consist in pointing out and measuring - in terms of money all the particular problems and elements that would have effect on the price of the end product. Many industries, however, have little freedom of choice. An example of this case is quoted by the cane sugar factory which cannot be erected in any place except near the plantation. Transportation of such a huge amount of this material will be costy. To evade such conditions a sugar factory in the Sudan has been erected in Guneid on the Blue Nile about 80 miles south-East Khartoum, in addition, steps have been taken to construct another one at Khashm El Girba. For the same reason, other factories have been

located at Aroma in the Eastern Sudan where there is enough quantity of cotton stalks, which are to be used as raw material to feed the factory.

The Location of an industry, however, plays an important role in minimization of costs. Location not built to plan, that is to say, not economically sited may be handicapped by the severe competition from others. On the other hand, the transfer of a plant from one place to another will greatly affect the major part of the invested capital in making new buildings, the necessary ancilaries and utilities. The efficiency of the machines, too, might be effected due to this transfer. Realizing this, it is, therefore, important from the start to choose the most suitable place so as to avoid all these problems.

Besides the raw material resources, there are other factors which determine the location of an industry. These may be grouped under transport facilities, market, geographic factors, availability of workers, water resources, electricity and other possible factors. Under the heading of raw material comes all the materials needed by the factory and the packing material for the products. The influence and importance of raw material might even determine the location of the factory or could equally be counter-balanced by the effect of another material or factor.

An illustration of such effect could be quoted in case of the Tannery which is located in Khartoum South. Many points had to be taken carefully into consideration. The main limitation was the huge quantity of water needed for treatment of hides and skins and ultimately the disposal of waste water. This problem, however, made Khartoum South the most favourable site for location as opposed to other possible sites.

In the Sudan where you need to transport a commodity very long distances (area of Sudan 1 million square miles) the rate of transport may also influence the siting of any one factory. It is often better from the economical point of view

to place it as near to the raw material area as possible.

In some cases, the market plays an important role in siting any industry and it could be a limiting factor in plant location. However, the advantages and disadvantages of all the possible sites should first of all be checked and a thorough study should be made before the final commitment.

To sum up, plant location is considered one of the most important factors determining the success of an industry. By choosing and planning the best locality on an economical basis, one could be sure of the smooth running of a factory. This is, of course, so long as other factors are favourable.

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